

	Document ID	Issue Date	Pages	Title	Current OR	Current XRef	Inventor
1	US 20050085208 A1	20050421	125	Apparatus, system, and method for down-converting and up-converting electromagnetic signals	455/313	375/316	Sorrells, David F. et al.
2	US 20050085207 A1	20050421	125	Apparatus, system, and method for down-converting and up-converting electromagnetic signals	455/313	375/316	Sorrells, David F. et al.
3	US 20050058180 A1	20050317	57	Ultra-wideband communication apparatus and methods	375/130	375/295	Lakkis, Ismail
4	US 20050041758 A1	20050224	39	Holographic ranging apparatus and methods	375/316		Rosen, Lowell
5	US 20050041757 A1	20050224	40	Frequency-hopped holographic communications apparatus and methods	375/295		Rosen, Lowell et al.
6	US 20050041756 A1	20050224	39	Real domain holographic communications apparatus and methods	375/295		Rosen, Lowell
7	US 20050031051 A1	20050210	39	Multiple access holographic communications apparatus and methods	375/295	375/141; 375/146; 375/147; 375/316	Rosen, Lowell et al.
8	US 20040258177 A1	20041223	79	Multi-dimensional space Gray code maps for multi-dimensional phase modulation as applied to LDPC (Low Density Parity Check) coded modulation	375/308		Shen, Ba-Zhong et al.
9	US 20040240588 A1	20041202	65	Compensation for non-linear distortion in a modem receiver	375/340	375/350	Miller, William J.
10	US 20040174937 A1	20040909	27	Zero excess bandwidth modulation	375/261		Ungerboeck, Gottfried
11	US 20040131125 A1	20040708	103	Enhanced wireless packet data communication system, method, and apparatus applicable to both wide area networks and local area networks	375/261		Sanderford, H. Britton JR. et al.

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12	US 20040091058 A1	20040513	15	QAM receiver and method for constellations having at least sixteen symbols	375/261		Tosato, Filippo et al.
13	US 20040042565 A1	20040304	10	Maximum likelihood a posteriori probability detector	375/341		Garrett, David
14	US 20040042556 A1	20040304	16	Coded MIMO systems with selective channel inversion applied per eigenmode	375/260	375/295; 375/299	Medvedev, Irina et al.
15	US 20030223506 A1	20031204	84	Variable code rate and signal constellation turbo trellis coded modulation codec	375/265	375/279; 714/792	Cameron, Kelly Brian et al.
16	US 20030210750 A1	20031113	30	Multiple input, multiple output system and method	375/295		Onggosanusi, Eko N. et al.
17	US 20030198305 A1	20031023	34	Co-channel interference receiver	375/341	375/346	Taylor, Matthew A. et al.
18	US 20030174785 A1	20030918	19	Method and apparatus of 8PSK modulation	375/308		Wang, Jing et al.
19	US 20030169830 A1	20030911	6	Method and apparatus for modulation using an at least four-dimensional signal constellation	375/308		Ruotsalainen, Keijo et al.
20	US 20030156624 A1	20030821	39	Signal transmission method with frequency and time spreading	375/131	375/295	Koslar
21	US 20030147479 A1	20030807	50	System and method for shared decoding	375/341	714/795	Shah, Manish et al.
22	US 20030133519 A1	20030717	51	Forward tracing decoder apparatus and method	375/340	375/341	Shah, Manish et al.
23	US 20030118130 A1	20030626	50	System and method for shared decoding using a data replay scheme	375/340	375/341	Greenberg, Mark et al.
24	US 20030118127 A1	20030626	51	System and method for concurrently demodulating and decoding multiple data streams	375/316	375/341	Peting, Mark

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25	US 20030112901 A1	20030619	17	Method and apparatus for determining the log-likelihood ratio with precoding	375/340		Gupta, Alok Kumar
26	US 20030112882 A1	20030619	17	System and method for multiple signal carrier time domain channel estimation	375/260	375/340	Sampath, Hemanth
27	US 20030108117 A1	20030612	22	Time-domain transmit and receive processing with channel eigenmode decomposition for MIMO systems	375/295	375/346	Ketchum, John W. et al.
28	US 20030103584 A1	20030605	28	Iterative detection and decoding for a MIMO-OFDM system	375/340		Bjerke, Bjorn A. et al.
29	US 20030081692 A1	20030501	27	Optimization of MCS and multi-code with TFCI signaling	375/295		Kwan, Raymond et al.
30	US 20030076890 A1	20030424	25	Method and apparatus for detection and decoding of signals received from a linear propagation channel	375/264		Hochwald, Bertrand Martyn et al.
31	US 20030067992 A1	20030410	30	Optimal trellis code design for QPSK and higher order quadrature amplitude modulations	375/265	375/261; 375/279	Karaoguz, Jeyhan et al.
32	US 20030063685 A1	20030403	35	Coding method in multicarrier transmission and encoder using the same	375/295		Yoshida, Makoto
33	US 20020154705 A1	20021024	27	High efficiency high performance communications system employing multi-carrier modulation	375/267	375/261; 375/298; 375/299	Walton, Jay R. et al.
34	US 20020136318 A1	20020926	23	Transmission system for transmitting a multilevel signal	375/261		Gorokhov, Alexei et al.
35	US 20020131525 A1	20020919	10	Method of transmitting and receiving QAM-16 digital signals	375/298		Fang, Juing
36	US 20020114400 A1	20020822	24	Estimating timing error in samples of a discrete multitone modulated signal	375/260	375/261; 375/371	Bombay, Bart John

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37	US 20020080887 A1	20020627	34	In-band adjacent-channel digital audio broadcasting system	375/295		Jeong, Young-Ho et al.
38	US 20020080886 A1	20020627	165	Method for selecting frame encoding parameters in a frame-based communications network	375/295		Ptasinski, Henry S. et al.
39	US 20020080885 A1	20020627	6	Combined turbo coding and trellis coded modulation	375/295		Mead, Donald C.
40	US 20020051498 A1	20020502	24	Decoding system and method for digital communications	375/262		Thomas, John S. et al.
41	US 20020044610 A1	20020418	44	DSL rate adaptation	375/261	375/222; 375/377	Jones, David
42	US 20010033611 A1	20011025	52	Apparatus and method for synchronizing an SCDMA upstream or any other type upstream to an MCNS downstream or any other type downstream with a different clock rate than the upstream	375/219	375/261	Grimwood, Michael et al.
43	US 6882634 B2	20050419	160	Method for selecting frame encoding parameters to improve transmission performance in a frame-based communications network	370/338	370/349; 375/316	Bagchi, Amit G. et al.
44	US 6877117 B1	20050405	21	Optical signal receiver and method with decision threshold adjustment based on a relative percentage error indicator	714/704	375/340; 714/751	Childers, Mark et al.
45	US 6865393 B1	20050308	24	Method and system for excess resource distribution in a communication system	455/452.2	375/261; 375/298; 455/452.1; 455/522; 455/67.11; 455/67.13	Baum, Kevin Lynn et al.

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46	US 6865233 B1	20050308	19	Method and system for control signalling enabling flexible link adaptation in a radiocommunication system	375/261		Eriksson; Stefan et al.
47	US 6853690 B1	20050208	166	Method, system and apparatus for balanced frequency up-conversion of a baseband signal and 4-phase receiver and transceiver embodiments	375/295	375/256; 375/259; 375/298; 455/76; 455/91	Sorrells; David F. et al.
48	US 6836515 B1	20041228	88	Multi-modulation radio communications	375/260	375/261; 375/269	Kay; Stanley E. et al.
49	US 6823017 B1	20041123	19	Systems, methods and computer program products for filtering glitches from measured values in a sequence of code points	375/245	375/242; 375/341; 375/350; 708/300	Davis; Gordon Taylor et al.
50	US 6760388 B2	20040706	21	Time-domain transmit and receive processing with channel eigenmode decomposition for MIMO systems	375/295		Ketchum; John W. et al.
51	US 6757334 B1	20040629	72	Bit rate agile third-generation wireless CDMA, GSM, TDMA and OFDM system	375/259	375/219; 375/261; 375/296; 375/298	Feher; Kamilo

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52	US 6754169 B2	20040622	12	Method and system of operation for a variable transmission mode multi-carrier communication system	370/204	370/206; 370/436; 375/130; 375/261; 375/347	Baum; Kevin Lynn et al.
53	US 6735264 B2	20040511	38	Compensation for non-linear distortion in a modem receiver	375/340	329/319; 329/320; 375/349; 375/350; 455/303; 455/307; 455/43; 455/501	Miller; William J.
54	US 6711218 B2	20040323	12	System and method for received signal decoding	375/341	375/262; 375/329; 375/336	Dent; Paul W.
55	US 6697441 B1	20040224	28	Baseband processors and methods and systems for decoding a received signal having a transmitter or channel induced coupling between bits	375/340	375/324; 714/786	Bottomley; Gregory Edward et al.

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56	US 6668014 B1	20031223	17	Equalizer method and apparatus using constant modulus algorithm blind equalization and partial decoding	375/232	375/224; 375/229; 375/233; 375/265; 375/287; 375/340; 375/341; 375/346; 375/350; 708/322; 708/323; 714/786; 714/792; 714/794; 714/795; 714/796	Endres; Thomas J et al.
57	US 6665348 B1	20031216	73	System and method for interoperable multiple-standard modulation and code selectable Feher's GMSK, enhanced GSM, CSMA, TDMA, OFDM, and third-generation CDMA, W-CDMA and B-CDMA	375/259	375/130; 375/219; 375/261; 375/298	Feher; Kamilo
58	US 6611567 B1	20030826	16	Method and apparatus for pulse shaping	375/298		Balakrishnan; Jaiganesh et al.

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59	US 6608870 B1	20030819	39	Data frame for 8 MHZ channels	375/270	348/725; 375/321; 375/341	Fimoff; Mark
60	US 6603822 B2	20030805	173	Communicating errors in a telecommunications system	375/340	398/99	Brede; Jeffrey et al.
61	US 6529558 B1	20030304	40	Coding and decoding a signal modified in accordance with the feedback states of an encoder	375/262	375/264; 375/341; 375/364	Fimoff; Mark et al.
62	US 6496543 B1	20021217	16	Method and apparatus for providing high speed data communications in a cellular environment	375/295	375/358; 375/377	Zehavi; Ephraim
63	US 6473394 B1	20021029	34	Apparatus and method for bandwidth management in a multi-point OFDM/DMT digital communications system	370/208	375/261	Marchok; Daniel J. et al.
64	US 6470055 B1	20021022	71	Spectrally efficient FQPSK, FGMSK, and FQAM for enhanced performance CDMA, TDMA, GSM, OFDM, and other systems	375/259	370/215; 375/219; 375/261; 375/269; 375/298; 375/308; 375/329	Feher; Kamilo
65	US 6466150 B1	20021015	24	Polar analog-to-digital converter	341/155	370/313; 375/308	Shah; Peter Jivan
66	US 6430227 B1	20020806	18	FM in-band-on-channel digital audio broadcasting method and system	375/260	375/295; 375/316	Kroeger; Brian William et al.



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67	US 6345377 B1	20020205	14	Digital audio broadcasting method using puncturable convolutional code	714/790	370/206; 375/308	Kroeger; Brian William et al.
68	US 6343103 B1	20020129	14	Methods and apparatus for representation of branch metrics in a communication system decoder	375/261	375/262; 375/264; 375/265; 375/341; 714/792; 714/795; 714/796	Lou; Hui-Ling et al.
69	US 6334219 B1	20011225	180	Channel selection for a hybrid fiber coax network	725/106	341/100; 370/280; 375/235; 375/286	Hill; Terrance J. et al.
70	US 6327316 B1	20011204	36	Data receiver using approximated bit metrics	375/341	375/260	Ikeda; Tamotsu
71	US 6310909 B1	20011030	40	DSL rate adaptation	375/220	375/261	Jones; David
72	US 6263017 B1	20010717	40	Method and apparatus for signal transmission and reception	375/222	375/219; 375/220; 375/340	Miller; William J.
73	US 6195396 B1	20010227	9	Encoding/decoding system using 16-QAM modulation encoded in multi-level blocks	375/261	329/304; 332/103; 375/298	Fang; Juing et al.

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74	US 6185259 B1	20010206	16	Transmitter/receiver for GMSK and offset-QAM	375/261	332/100; 332/103; 375/274	Dent; Paul W.
75	US 6175550 B1	20010116	11	Orthogonal frequency division multiplexing system with dynamically scalable operating parameters and method thereof	370/206	375/261	van Nee; Richard D. J.
76	US 6141317 A	20001031	32	Apparatus and method for bandwidth management in a multi-point OFDM/DMT digital communications system	370/208	370/207; 375/261	Marchok; Daniel J. et al.
77	US 6118826 A	20000912	12	Method and apparatus for encoding/decoding QAM trellis coded data	375/261	375/265; 714/795	Zehavi; Ephraim et al.
78	US 6108810 A	20000822	13	Digital audio broadcasting method using puncturable convolutional code	714/790	370/206; 375/308; 714/786	Kroeger; Brian William et al.
79	US 6097764 A	20000801	25	Pragmatic trellis-coded modulation system and method therefor	375/298	375/261; 714/786	McCallister; Ronald D. et al.
80	US 6078625 A	20000620	13	Pragmatic decoder and method therefor	375/261	375/262; 375/265; 375/341; 375/342; 714/755	McCallister; Ronald D. et al.

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81	US 6037835 A	20000314	5	Multi-mode autonomous selection demodulator	329/316	348/726; 375/324; 375/340; 375/343; 455/214; 455/233.1	Smith; Ronald P. et al.
82	US 5995551 A	19991130	13	Rotationally invariant pragmatic trellis coded digital communication system and method therefor	375/265	375/341; 714/792	McCallister; Ronald D. et al.
83	US 5966412 A	19991012	11	Apparatus and method for processing a Quadrature Amplitude Modulated (QAM) signal	375/341	375/261	Ramaswamy; Kumar
84	US 5909460 A	19990601	26	Efficient apparatus for simultaneous modulation and digital beamforming for an antenna array	375/130	342/383; 375/140; 375/260; 375/308; 375/347	Dent; Paul W.
85	US 5903546 A	19990511	53	Means and method of improving multiplexed transmission and reception by coding and modulating divided digital signals	370/232	370/235; 375/262; 375/265; 714/786	Ikeda; Tamotsu et al.

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86	US 5881106 A	19990309	19	Signal processing circuit to implement a Viterbi algorithm	375/262	341/107; 341/94; 375/341; 714/795; 714/796	Cartier; Michel
87	US 5878085 A	19990302	14	Trellis coded modulation communications using pilot bits to resolve phase ambiguities	375/280	375/265; 375/308; 375/332; 375/341	McCallister; Ronald D. et al.
88	US 5848102 A	19981208	12	Method and apparatus for encoding/decoding QAM trellis coded data	375/261	375/265; 714/792	Zehavi; Ephraim et al.
89	US 5740203 A	19980414	17	Trellis demapper of a convolutional decoder for decoding pragmatic trellis codes suitable for use in a multi-channel receiver of satellite, terrestrial and cable transmitted FEC compressed-digital television data	375/341	714/786; 714/792	Ramaswamy; Kumar et al.
90	US 5717471 A	19980210	11	Apparatus for demodulating and decoding satellite, terrestrial and cable transmitted digital television data	348/726	348/555; 348/558; 375/260; 375/265; 375/340	Stewart; John Sidney

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91	US 5692007 A	19971125	67	Method and apparatus for differential phase encoding and decoding in spread-spectrum communication systems with continuous-phase modulation	375/142	375/146; 375/150; 375/273; 375/283	Durrant; Randolph L. et al.
92	US 5651032 A	19970722	26	Apparatus and method for trellis decoder	375/341	375/265	Okita; Shigeru
93	US 5579304 A	19961126	30	Code-division multiple-access receiver with sequential interference-canceling architecture	370/342	375/148; 375/267; 375/341; 375/347; 375/349	Sugimoto; Hiroki et al.
94	US 5513215 A	19960430	37	High speed simulcast data system using adaptive compensation	375/233	375/229; 375/341; 375/348; 455/503	Marchetto; Robert F. et al.
95	US 5497401 A	19960305	15	Branch metric computer for a Viterbi decoder of a punctured and pragmatic trellis code convolutional decoder suitable for use in a multi-channel receiver of satellite, terrestrial and cable transmitted FEC compressed-digital television data	375/341	375/262; 714/759; 714/795; 714/796	Ramaswamy; Kumar et al.
96	US 5432821 A	19950711	28	System and method for estimating data sequences in digital transmissions	375/340	375/349	Polydoros; Andreas et al.

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97	US 5233629 A	19930803	13	Method and apparatus for communicating digital data using trellis coded QAM	375/262	329/304; 332/103; 375/265; 714/755; 714/759; 714/792	Paik; Woo H. et al.
98	US 4660214 A	19870421	15	QANI Trellis-coded signal structure	375/262	375/265; 375/285; 714/792; 714/795	Pahlavan; Kaveh et al.